

CLAIMS

1. A method in a portable subscriber unit for minimizing a connection setup time in a communication network comprising a wide area network, the
5 method comprising the steps of:

maintaining in a memory of the portable subscriber unit a list
identifying a plurality of devices which are to be connected quickly through the
communication network;

establishing a new connection with the communication network; and

10 performing, in response to establishing said new connection, when
necessary for pre-programming the communication network to minimize the
connection setup time for subsequent connections with said plurality of devices, at
least one of the steps of:

15 sending names of the plurality of devices to a domain name
server (DNS) of the communication network to obtain IP addresses corresponding
to the names, thereby causing the DNS to cache the IP addresses of the plurality of
devices for faster servicing of subsequent connections; and

transmitting a dummy Internet Protocol (IP) packet to said
plurality of devices.

20 2. The method of claim 1, wherein the performing step comprises the step
of performing both the sending step and the transmitting step.

25 3. The method of claim 1, further comprising the step of repeating the
performing step with regard to ones of said plurality of devices with which the
portable subscriber unit has not communicated for a predetermined length of
time.

30 4. The method of claim 1, wherein the step of maintaining said list
comprises the step of identifying a subset of devices with which the portable
subscriber unit has recently communicated.

5 5. The method of claim 1, wherein the step of maintaining said list
comprises the step of identifying a predetermined number of devices with which
the portable subscriber unit has most frequently communicated over a
predetermined time period.

10 6. The method of claim 1, wherein the step of maintaining said list
comprises the step of providing an interface for a user of the portable subscriber
unit to specify the plurality of devices which are to be connected quickly through
the wide area network.

15 7. The method of claim 1,
 wherein the step of establishing the new connection comprises the
steps of:
 establishing the new connection via a new local area network
(LAN); and
 comparing an identifier of the new LAN with a previously
stored identifier of a most recently connected old LAN, and
20 wherein the method further comprises, prior to the performing step,
the step of determining that the sending and transmitting steps are not necessary
when the identifier is equal to the previously stored identifier.

25 8. The method of claim 7, further comprising the step of determining that
the sending and transmitting steps are not necessary when the comparing step
indicates that the new LAN and the old LAN are sub-networks of a single LAN.

9. A portable subscriber unit for minimizing a connection setup time in a communication network comprising a wide area network, the portable subscriber unit comprising:

5 a processor for controlling the portable subscriber unit, the processor including a memory; and

a communication interface coupled to the processor for communicating with the communication network,

wherein the processor is arranged and programmed to:

10 maintain in the memory a list identifying a plurality of devices which are to be connected quickly through the communication network; establish a new connection with the communication network; and perform, in response to establishing said new connection, when necessary for pre-programming the communication network to minimize the connection setup time for subsequent connections with said plurality of devices, at least one of the steps of:

15 sending names of the plurality of devices to a domain name server (DNS) of the communication network to obtain IP addresses corresponding to the name, thereby causing the DNS to cache the IP addresses of the devices for faster servicing of subsequent connections; and

20 transmitting a dummy Internet Protocol (IP) packet to said plurality of devices.

10. The portable subscriber unit of claim 9, wherein the processor is further arranged and programmed to perform both the sending step and the transmitting step.

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11. The portable subscriber unit of claim 9, wherein the processor is further arranged and programmed to repeat at least one of the sending and transmitting steps with regard to ones of said plurality of devices with which the portable subscriber unit has not communicated for a predetermined length of time.

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12. The portable subscriber unit of claim 9, wherein the processor is further arranged and programmed to maintain said list by identifying a subset of devices with which the portable subscriber unit has recently communicated.

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13. The portable subscriber unit of claim 9, wherein the processor is further arranged and programmed to maintain said list by identifying a predetermined number of devices with which the portable subscriber unit has most frequently communicated over a predetermined time period.

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14. The portable subscriber unit of claim 9, further comprising
a user interface coupled to the processor for interfacing with a user,
and

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wherein the processor is further arranged and programmed to cooperate with the user interface to maintain said list by allowing a user of the portable subscriber unit to specify the plurality of devices which are to be connected quickly through the wide area network.

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15. The portable subscriber unit of claim 9, wherein the processor is further arranged and programmed to:

establish the new connection via a new local area network (LAN);

and

5 compare an identifier of the new LAN with a previously stored identifier of a most recently connected old LAN, and

prior to the performing step, determine that the sending and transmitting steps are not necessary when the identifier is equal to the previously stored identifier.

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16. The portable subscriber unit of claim 15, wherein the processor is further arranged and programmed to determine that the sending and transmitting steps are not necessary when the comparing step indicates that the new LAN and the old LAN are sub-networks of a single LAN.

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